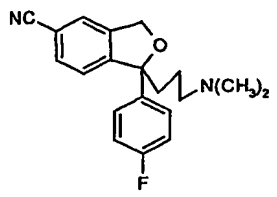
Claims:

1. A one pot process for the synthesis of citalopram of the formula 1 starting from 5-cyanophthalide without isolation and purification of the any intermediate stages, which comprises:



Formula-1

a) subjecting 5-cyanophtalide formula (7) to Grignard reaction with 4-fluorophenyl magnesium bromide in a solvent medium

b) quenching said Grignard reaction mass with aqueous ammonium chloride solution, separating an aqueous layer and an organic layer containing cyanohydroxymethylketone (8), diluting said organic layer with alcoholic solvents and subjecting the resulting solution to a reduction reaction presence of sodium borohydride,

c) diluting the reaction mixture of step (b) with water, and then distilling off low boiling solvent and separating the water immiscible organic solvent

d) subjecting said water immiscible organic solvent containing dihydroxy compound to cyclisation reaction in the presence of catalytic amount of acid,

e) subjecting said cyclized product in a solvent to c-alkylation reaction with 3-N,N` dimethylamonopropyl chloride in the presence of a strong base to get citalopram.

2. A process as claimed in claim 1, wherein in step a) said 4-fluorophenyl magnesium bromide is reacted with 5-cyanophthalide in a solvent selected from the group consisting of dichloromethane, dichloroethane, chloroform, toluene, benzene and chlorobenzene.

3. A process as claimed in claim 1 wherein said 4-fluorophenyl magnesium bromide is generated *in situ* by reacting 4-flurobromobenzene with magnesium and a catalytic amount of iodine in tetrahydrofuran medium.

4. A process as claimed in claim 1, wherein in step b), said alcoholic solvent is selected from methanol ethanol and isopropyl alcohol.

5. A process as claimed in claim 1, wherein in step c), after distilling off low boiling solvent, and separation of water immiscible organic solvent, the pH of the reaction mixture is adjusted to 8.5-9.5 using aqueous hydrochloric acid.

6. A process as claimed in claim 5, wherein in step c),said water immiscible solvent is toluene.

7. A process as claimed in claim 6, wherein said dihydroxy compound is subjected to cyclisation in the presence of catalytic amount of acid selected from para toluene sulphonic acid, benzene sulphonic acid and methane sulphonic acid to get 5-cyanophthalane.

8. A process as claimed in any preceding claim wherein said C-alkylation reaction of 5-cyanophthalane with N,N dimethylaminopropyl chloride is carried out in the presence of a strong base selected from sodium hydride and, potassum tertiary butoxide in a mixture of DMSO and toluene .

9. A process as claimed in claim 8 wherein after the completion of the c-alkylation reaction, the reaction mass is subjected to acid base work up to get citalopram base starting from 5-cyanophthalide without isolation of any intermediates.

10. A process as claimed in claim 1, wherein i) said Grignard reaction mass of step a) is subjected to a further Grignard reaction with 3N,N` dimethylaminopropylmagnesium chloride

ii) said Grignard reaction mass of step i) is quenched with aqueous ammonium chloride solution followed by work up to get dihydroxy product

iii) said dihydroxy product is subjected to cyclization in acidic medium to get citalopram directly from 5-cyanophthalide without isolating any intermediate stage.

11. A process as claimed in claim 10, wherein in step ii) said Grignard reaction mass is quenched with aqueous ammonium chloride solution and the organic layer is separated.

12. A process as claimed in claim 11 wherein said separated organic layer is subjected to cyclisation reaction with aqueous acid group selected from acetic acid, hydrochloric acid, sulphuric acid and hydrobromic acid.

13. A process as claimed in claim 12 wherein the said cyclisation reaction pH is adjusted to basic using one or more base such aqueous sodium hydroxide, potassium hydroxide and liquid ammonia solution.

15 A process as claimed in claim 13, wherein the said toluene solution is subjected to acid/base work up followed by concentration under reduced pressure to get citalopram directly from 5-cyanophthalide without isolating any intermediate stages.